

Application No 10/028,439
Amendment "B" dated August 6, 2004
Reply to Office Action mailed April 9, 2004

REMARKS

Applicants and applicants' attorney express appreciation to the Examiner for the courtesies extended during the recent interview held on July 28, 2004. Reconsideration and allowance of the above-identified application are now respectfully requested. Claims 1-24 are pending, wherein claims 1, 8 and 14 are currently amended, and new claim 24 was added. Support for the claim limitations in the amended claims and new claim 24 not already found in the claims is found in the drawings at Figure 2 and Figure 3, and in the application at page 9, paragraph 26, as well as the discussion describing Figures 2 and 3.

As indicated in the Interview Summary, the proposed amendment (which is embodied in new claim 24) "appear[s] to distinguish over Ouchi" (U.S. Patent No. 6,597,713).

The Office Action rejects claims 1-23 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,597,713 to Ouchi.¹ In rejecting the claims, the Office Action refers to the combined teachings of Figures 21 and 30. However, as discussed during the Examiner Interview, Figures 21 and 30 refer to two completely different embodiments. Figure 21 refers to an embodiment that only includes a VCSEL but no photodetector, while Figure 30 is directed to an embodiment that includes a VCSEL and a photodetector. Figure 30 is a schematic diagram of the embodiment depicted in Figure 24, not Figure 21. Ouchi, col. 18, line 1 through col. 19, line 30. That only Figure 24 *et. seq.* describe embodiments that include both a VCSEL and a photodetector is clearly stated at column 18, lines 2-4. The description of Figures 7-23 spanning columns 9-17 makes no mention of any photodetector. Therefore, it would clearly be improper to pick and choose from among the unrelated features shown in Figures 7-23 on the one hand, and Figures 24-32, on the other, in order to reconstruct the claimed subject matter in the present application. In view of this, the Office Action fails to state a valid *prima facie* rejection under 35 U.S.C. § 102(e).

To anticipate a claim, a single source must contain all of the elements of the claim. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1379, 231 USPQ 81, 90 (Fed. Cir. 1986); *Atlas Powder Co. v. E. I. du Pont de Nemours & Co.*, 750 F.2d 1569, 1574, 224 USPQ 409, 411 (Fed. Cir. 1984); *In re Marshall*, 578 F.2d 301, 304, 198 USPQ 344, 346 (CCPA 1978). Missing elements may not be supplied by the knowledge of one skilled in the art or the

¹ Because Ouchi is only citable as prior art under 35 U.S.C. § 102(e) Applicants do not admit that Ouchi is in fact prior art, but reserve the right to "swear behind" Ouchi in order to remove it as a reference.

Application No 10/028,439
Amendment "B" dated August 6, 2004
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disclosure of another reference. *See Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 723 USPQ 1264, 1271 (Fed. Cir. 1984). Moreover, the single source must disclose all of the elements "arranged as in the claim". *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ.2d 1913, 1920 (Fed. Cir. 1989) (emphasis added); *see Connell v. Sears Roebuck & Co.*, 722 F.2d 1542, 1548, 220 USPQ 193, 198 (Fed. Cir. 1983).

Applying the applicable case law to the facts in the present case, it is clear that Ouchi does not anticipate the claims as amended or as previously presented. Ouchi does not show all of the claimed elements "arranged as in the claim". Instead, Figure 21 shows one arrangement of elements that do not meet every limitation of the claims, and Figure 30 shows another arrangement of elements that also does not meet the limitations of the claims.

In particular, neither Figure 21 nor Figure 30 of Ouchi discloses every element as arranged in claim 1 as amended. On the one hand, Figure 21 does not show any photodetector. As a result, Figure 21 does not show the "light sensor" limitation of claim 1. The same is true for amended claims 8 and 14.

Figure 30, on the other hand, does not show a light sensor "on said semiconductive substrate and positioned along said light path between said vertical cavity surface emitting laser and said etched cavity in said semiconductive substrate" as recited in amended claim 1. Nor does Figure 30 show a light sensor "positioned along said light path between said vertical surface emitting laser and said optical fiber" as recited in amended claim 8. In particular, Figure 30, which relates to Figure 24, shows no "etched cavity" or "fiber optic" at all, let alone having the required structural relationship relative to the light sensor. Moreover, Figure 30 shows light being emitted from the VCSEL in two directions. This is consistent with Figure 24, which shows light being emitted in two directions, with the light emitted in the direction of the photodetector being completely blocked and not allowed to pass into any etched cavity, which, of course, does not exist in the embodiment shown in Figure 24.

During the Examiner Interview, it was suggested by the Examiner that the Summary section in Ouchi describes the claimed invention at col. 5, lines 14-42. In response, Applicants point out that the discussion at col. 5, lines 14-42, describes three different embodiments that are easily matched up with corresponding embodiments in the drawings. The first embodiment at col. 5, lines 14-20, describes a "first optical functional device", which is either a VCSEL or a photodetector, but not both. Embodiments that include a VCSEL, but no photodetector, are

Application No 10/028,439
Amendment "B" dated August 6, 2004
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shown in Figures 7-23. None of the drawings show a photodetector by itself in the absence of a VCSEL.

The second embodiment at col. 5, lines 21-28, describes a first optional functional device on a first substrate and a photodetector provided on a second substrate for monitoring the light output of the light radiating device. This embodiment is shown in Figures 24-26 and Figure 30. The "first substrate" is embodied by the "laser substrate 221" and the second substrate is embodied by the "wiring substrate 222" shown in Figure 24. See column 18, lines 5-14. As is clearly shown in Figure 24, and confirmed in Figure 30, the majority of light produced by the VCSEL is emitted in a direction opposite to the photodetectors 211 on the wiring substrate. A tiny portion of light emitted in a direction opposite to the main light impinges on the photodetectors 211, but does not travel into any cavity, let alone an "etched cavity".

Finally, the third embodiment described at col. 5, lines 29-42 is directed to a device that includes the first substrate comprising a surface emitting light-radiating device and a photodetector on a second substrate, but positioned oppositely to the surface emitting light-radiating device "to receive both external light and light from the surface emitting light-radiating device". This embodiment is clearly shown in Figure 27, which shows the photodetector 211 disposed on the site of the second substrate opposite to the side of the substrate adjacent to the surface emitting light-radiating device 221. In this way, the photodetector is able to detect light from the light emitting device, as well as external light.

In view of the foregoing, Applicants submit that the discussion in the summary at column 5, lines 14-42, does not describe an entirely new embodiment not depicted in the drawings and described in the detailed description. Instead, this portion of the summary merely summarizes the actual embodiments described in the Detailed Description. This is to be expected, since that is what the summary section is intended to do. In view of this, it is Applicants' position that the summary does not disclose the embodiments described in claims 1, 14, and 18 as now amended.

Moreover, because Ouchi clearly sets forth two distinct embodiments of devices, a first type of device that includes a surface emitting light-radiating device but no photodetector in Figures 7-23, and a second embodiment that includes a surface emitting light-radiating device and a photodetector, one must look to what Ouchi actually teaches rather than attempting to pick and choose from among unrelated embodiments so as to find all of the elements in the present claims. Such an exercise would, of course, be based on impermissible hindsight, using the

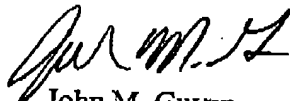
Application No10/028,439
Amendment "B" dated August 6, 2004
Reply to Office Action mailed April 9, 2004

present application as a guide in order to pick and choose from among unrelated teachings found in Ouchi. Whereas Ouchi shows the use of fiber optics in the embodiments shown in Figures 19 and 21, no such fiber optics are shown in any of the embodiments in Figures 24-32. The embodiments shown in Figures 19 and 21 differ from those in Figures 24 and 27 because they are intended to perform different functions. It would be contrary to Ouchi to mix-and-match unrelated teachings from unrelated embodiments to construct a new device never contemplated by Ouchi.

In conclusion, Applicants believe that the claims as now amended are in allowable form. In the event the Examiner finds any remaining impediment to the prompt allowance of this application, which may be clarified through a telephonic interview or that may be overcome by Examiner Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 6th day of August 2004.

Respectfully submitted,



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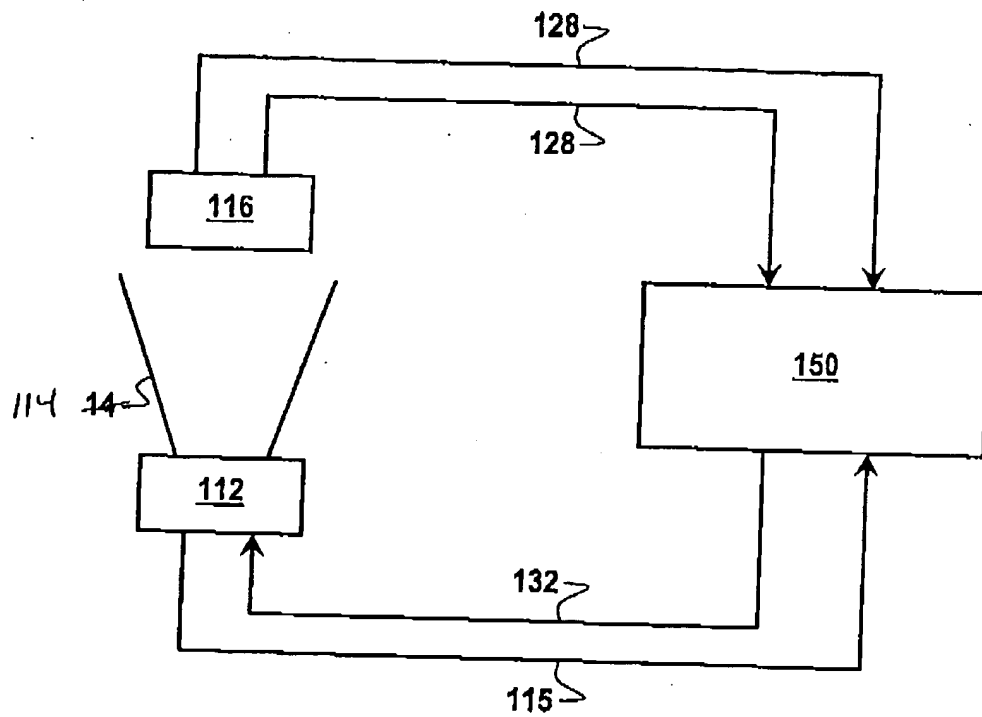


Figure 3